

## ABSTRACT

SUBSTRATE FOR THIN FILM FORMATION, THIN FILM SUBSTRATE, OPTICAL WAVEGUIDE, LIGHT EMITTING DEVICE, AND SUBSTRATE FOR LIGHT EMITTING DEVICE MOUNTING

It found out that a single crystal thin film which is excellent in crystallinity and comprises as the main ingredients at least one or more materials selected from a gallium nitride, an indium nitride, and an aluminum nitride can form on a substrate of a sintered compact which comprises as the main ingredients an aluminum nitride, a ceramic material having the crystal structure of a hexagonal system or a trigonal system, and a ceramic material having optical permeability.

The above finding has allowed the preparation of a light emitting device excellent in luminous efficiency, an optical waveguide exhibiting low loss, and a substrate for light emitting device mounting capable of controlling a direction of luminescence emitted to a substrate exterior.